Fars Province Agricultural Organization

Comprehensive Bank

Medicinal plants

Province Fars


بسم الله الرحمن الرحیم


همه با هم
جهاد
کشاورزی
۱۳۷۹
Fars Province Agricultural Organization

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Introduction:

With four different vegetative zones, Iran has a unique treasure of medicinal plants .In addition, the position of these products in the pharmaceutical basket of families has caused this field to have a high capacity in job creation, wealth generation, and foreign exchange for the country. For this reason, the Supreme Leader of the Islamic Revolution, in the clauses of the general health policy, referred to the promotion of the cultivation of medicinal plants under the supervision of the Ministry of Agricultural and the support of the development of scientific and technical innovations in the production and supply of traditional medicinal products under the supervision of the Ministry of Health and Medical Education.

Fars province, located in the vegetative areas of the Gulf of Oman and Zagros, has various ecological characteristics and suitable soil conditions, and has a flora rich in medicinal plants. More than 1,600 species of medicinal plants have been identified in this province and at least 50 of them have public, traditional and commercial uses. Nowadays, due to changes in rangeland uses and destruction of forests, the occurrence of successive and long-term droughts, reduction of water resources and overgrazing of livestock, we are witnessing the loss of natural resources of medicinal plants.

In this regard, the movement for the production of medicinal plants with the aim of increasing productivity, improving the livelihood of farmers, as well as preserving endangered plant species, has been the focus of support and planning of the Fars Province Agricultural Jihad Organization

Ahad Behjat Haghighi

President of the Agriculture-Jahad Organization of Fars Province

Future Prospects for the Development of Medicinal Plants:

According to the Ministry of Health, about 3 percent of Iranians use herbal medicines and 97 percent use chemical medicines. About 150 types of herbal medicines and 4200 types of chemical medicines are available in the Iranian market. Due to the increasing awareness of people about the role of herbal medicines and the harmful effects of chemical drugs, the use of herbal medicines and consequently the development of the cultivation of these plants is increasing.The export of medicinal plants has gradually become one of the most profitable branches of the agricultural economy. According to the FAO (World Food and Agriculture Organization), the volume of trade in medicinal plants will increase 100 times by 2050 and reach $500 billion.

This comes at a time when the issue of chemical-free treatment is being seriously pursued in the industrialized countries of the world. The area under cultivation of medicinal plants in the country is about 80,000 hectares, which is supposed to reach 200,000 hectares in a comprehensive plan prepared for this purpose.

These figures show the country's high capability and capacity, which has been neglected so far, but with the appropriate measures taken in the last few years, this amount is increasing. Of the 422,000 plant species in the world, there are about 8,000 species in Iran, of which 1,728 species grow exclusively in Iran alone.

Applications of medicinal plants:

Medicinal plants have a special value and importance in ensuring the health and well-being of human societies, both in terms of treatment and prevention of diseases. This use has been as old as human history and plants have always been one of the most important sources of food and medicine for human beings over many generations.

From a historical point of view, plants have been very important in the development of societies and extensive research has been done to find natural products and materials of herbal medicines throughout history, which fortunately with the world, especially developed countries, turning to the use of herbal products and their increasing consumption in the world, the emerging industry of medicinal plants is being formed. Some of the uses of medicinal plants include:

- Production of herbal medicines
- Production of cosmetics
- Application in the food industry
- Application as a pesticide in plant pest control
- The use of medicinal plants in traditional medicine
- The Role of Medicinal Plants in the Tourism Industry
- Role in Job Creation

The importance of medicinal plants from economic, social and environmental aspects:

The development of investment in the field of medicinal plants industries in the first place depends on the culture-building, promotion and development of the use of medicinal plants and their products inside the country, and the export of medicinal plants and their products will also play a decisive role in the development of the medicinal plants industry. The medicinal plants industry is one of the most important industries in Iran, which is very compatible with the new climatic conditions of the country (water scarcity).

Nowadays, the importance of medicinal plants and their vital role in advancing national, regional and global goals for the realization of health, pharmaceutical self-sufficiency, job creation and economic development is not hidden. Currently, the value added from the export of medicinal plants in the world is reported to be about $111 billion in 2018, which is expected to reach $5,000 billion in 2050.

Medicinal plants have a special value in the biological sciences, medicine, and veterinary sciences in terms of prevention and treatment of human diseases, and in recent years, the use of medicinal plants has been increasing day by day due to their proven beneficial effects, cheapness, lack of side effects, and also compatibility with the environment.

Creating suitable investment opportunities for the production of more medicinal plants in the agricultural sector is important and it is necessary to conduct extensive research in the field of various products produced from these plants, especially in Iran.

Objectives of developing the area under cultivation of medicinal plants:

- Efforts to manage knowledge in the field of medicinal plants and traditional medicine;
- Self-reliance, job creation and maximum use of domestic power in the field of medicinal plants and traditional medicine;
- Maximum participation of the private sector, cooperatives, non-governmental organizations and foreign investors and emphasis on coordination
- Observance of biosafety principles within the framework of international protocols accepted in the country;
- Maximum use of nature and natural products in line with human health and social welfare while preserving nature's ecosystem cycles;
- Reducing government enterprise, strengthening the private sector, and supporting the creation and quantitative and qualitative development of knowledge-based companies;
- Preserving the genetic resources of the country's native and exclusive medicinal plants;
- foreign exchange from exports;
- Reducing pharmaceutical dependence on foreign countries and preventing foreign currency outflows;
- Increasing the area under cultivation by 27,500 hectares from 2017 to 2025
- Maximum focus on marketing medicinal plants and identifying destination countries

- **Medicinal Plants Development Program with a Sustainable and Knowledge-Based Development Approach in Fars Province:**
- Increasing the added value of products for domestic consumption by improving the quality of production, harvesting, processing and packaging processes for domestic consumption
- Increasing the added value of exported pharmaceutical products by preventing bulk exports and raw sales (development of the production chain to processing, export and trade)
- Establishment of pharmaceutical processing and packaging industries in major production hubs to empower villagers
- Laying the groundwork and creating basic infrastructure for the construction of a large factory for the processing of medicinal plants in the province
- Preventing the extinction of endangered species through propagation by tissue culture method (e.g. Thymus sapiens)
- Supply of raw materials required by processing and pharmaceutical companies
- Increasing the productivity of medicinal plants by increasing yield per unit area by measures including: breeding and agronomics, identification and propagation of superior and high-yielding cultivars and genotypes with low water requirement
- Creating jobs to prevent migration and urbanization.

Optimal use of existing lands and facilities

Comprehensive Bank of Medicinal Plants of Fars Province

- Using the capacity of medicinal plants for the development of ecotourism and nature tourism
- Maximum utilization of water and soil resources, especially water and soil resources of grade 2 and 3 for quantitative and qualitative development
- Diversification in the production of medicinal plants through the development of the cultivation of multiple species
- Organizing Traditional Perfumes
- Setting up supply and export terminals for medicinal plants
- Increasing Competition among Medicinal Plant Producers
- Creating a culture of promoting the cultivation of medicinal plants among farmers and producers
- Supply of suitable seeds
- Providing low-cost facilities for the development of the cultivation of medicinal plants in the province
- The use of medicinal plants in the beekeeping industry

Artichoke

Botany

Peranial

Scientific Name
Cynara scolymus
Family Name
Asteraceae
Organs used
Flowers

Brief Introduction

It is a herbaceous, rough plant with a perennial underground stem. The leaves are long and gray in color, and the flowers form at the end of the stem.

Planting time
Spring
Harvest Time
Summer

Production hub with County suitable for cultivation capability

Feasibility Study

- sepidan
- Pasargad

Production Rate

2 Tons

Cultivated Area

0.5 Acres

Economic Analysis

Amount Investment (Million Rials per hectare))	Gross Income Annual (Million Rials per hectare)
600-720	**620-830**

lavender

Botany

Scientific Name
Lavandula officinali
Famiy Name
Lamiaceae
Organs used
Aerial Parts

Brief Introduction

Lavender is a plant of the mint genus that is in the form of a thick and small bush with a height of 30 to 60 cm with multiple stems and its stems are square and all parts of this plant have a pungent Odor.

Production hub with County suitable for cultivation capability

Feasibility Study

Production rate

10.6 Tons

Cultivated Area

21 Acres

Economic Analysis

Amount Investment (Million Rials per hectare))	Gross Income Annual (Million Rials per hectare)
1000 -1200	**1350 - 2250**

Planting time
Spring
Harvest Time
Summer

Rhubarb

Botany

Scientific Name

Rubia tinctorum

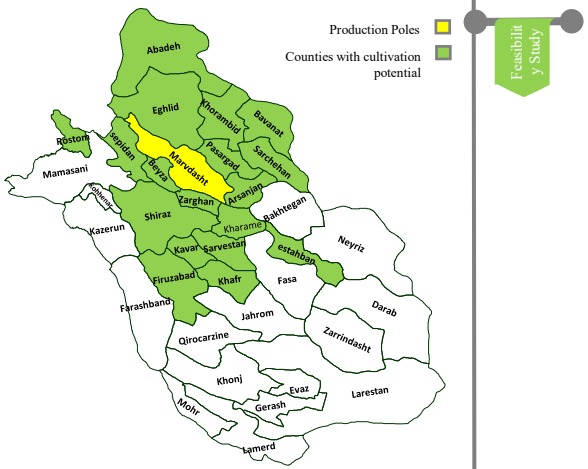
Family Name

Rubiaceae

Organs used

Root

Production hub with County suitable for cultivation capability



Feasibility Study

Production Rate: 1 Tons

Cultivated Area: 1 acre

Brief Introduction

The stem of this plant is covered with tiny thorns and its height reaches about two meters. It sticks to walls and trees using its tiny thorns. Its leaves are oval, pointed, and long, which emerge in groups and in the shape of an umbrella from the side of the stem.

Planting time

Spring

Harvest Time

Autumn

Economic Analysis

Amount Investment (Million Rials per hectare))

1200 -1320

Flixweed

Botany

Scientific Name
Sisymbrium sp
Family Name
Cruciferae
Organs used
Seed

Production hub with County suitable for cultivation capability

Feasibility Study

Production Rate

6651 Tons

Cultivated Area

19402 Acres

Brief Introduction

It is a herbaceous, annual or two-year-old plant up to 80 cm in height that grows as wild plant on the side of roads and relatively humid places and non-agricultural.

Planting time
Winter
Harvest Time
Spring

Economic Analysis

Amount Investment (Million Rials per hectare))	Gross Income Annual (Million Rials per hectare)
35 - 55	**280 - 700**

Peppermint

Botany

Scientific Name

Mentha piperita

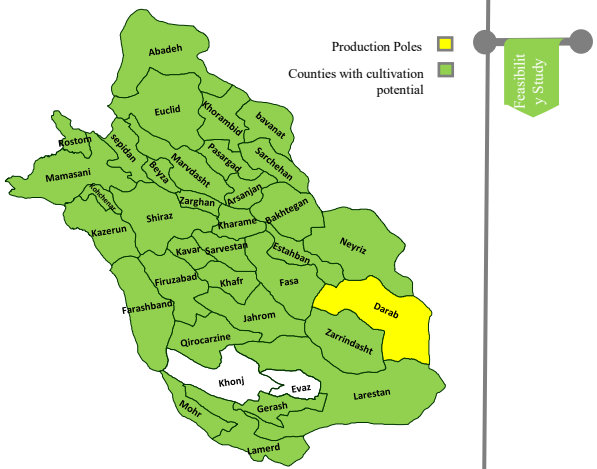
Family Name

Lamiaceae

Organs used

Leaf

Production hub with County suitable for cultivation capability



Feasibility Study

Production Rate

106 Tons

Cultivated Area

41 Acres

Brief Introduction

Peppermint is a perennial, seed-bearing plant, seedy plant with scattered fluff and short roots. The stem of this plant is rectangular and reddish-purple in color, on which elliptical leaves are placed cross-sectionally.

Planting time

Spring, Autumnnv

Harvest Time

Throughout the year

Economic Analysis

Amount Investment (Million Rials per hectare))	Gross Income Annual (Million Rials per hectare)
180 -260	550-780

Aloe

Botany

Scientific Name

Aloe vera or Aloe barbadensis

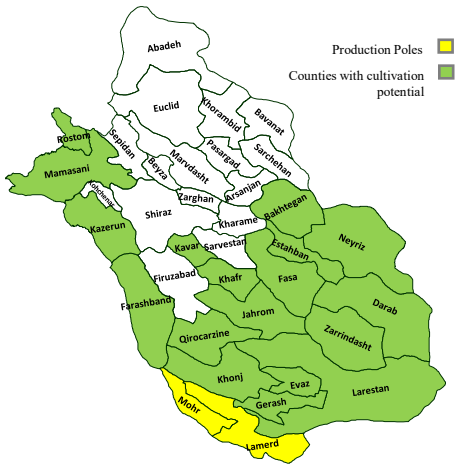
Family Name

Asphodelaceae

Organs used

Leaf

Production hub with County suitable for cultivation capability



Feasibility Study

Production Rate

6420 Tons

Cultivated Area

107 Acres

Brief Introduction

One of the most famous properties of aloe vera is the benefits for the skin and hair. Another name for aloe vera is yellow patience plant. Aloe vera grows in hot, dry climates and is widely distributed in India, Africa and other growing regions.

Planting time

Throughout the year

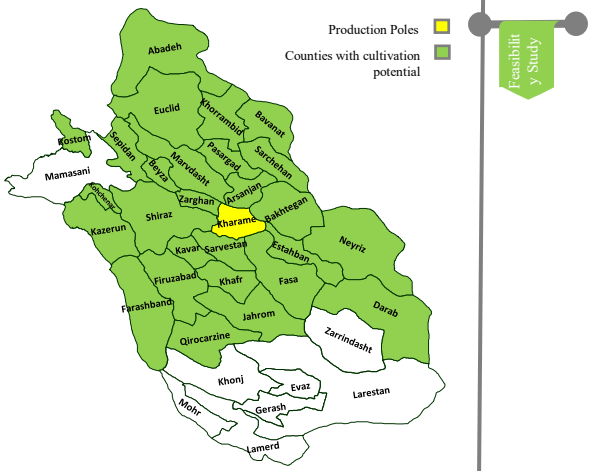
Harvest Time

Throughout the year

Economic Analysis

Amount Investment (Million Rials per hectare))	Gross Income Annual (Million Rials per hectare)
62 -120	2400 - 3100

Production hub with County suitable for cultivation capability



Feasibility Study

Production Rate

228 Tons

Cultivated Area

400 Acres

Botany

Scientific Name
Cuminum cyminum
Family Name
Apiaceae
Organs used
Seed

Brief Introduction

It is a small and herbaceous annual plant with a height of 60 cm, its roots are long and narrow in white color, its stem is straight, and its leaves are in the form of a narrow, thread-shaped strip and green color.

Planting time
winter
Harvest Time
Spring

Economic Analysis

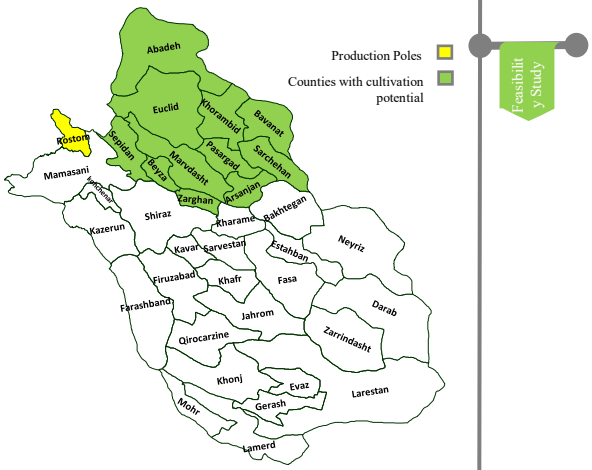
Amount Investment (Million Rials per hectare))	Gross Income Annual (Million Rials per hectare)
62 - 120	370 -980

Caraway

Botany

Scientific Name
carum carvi
Family Name
Apiaceae
Organs used
seed

Production hub with County suitable for cultivation capability



Feasibility Study

Production Rate

6 Tons

Cultivated Area

22 Acres

Brief Introduction

Black cumin is one of the plants native to Asia that is used in a variety of dishes due to its unique flavor. When dried, this plant resembles cumin seeds.

Planting time

Autumn, winter

Harvest Time

Spring

Economic Analysis

	Amount Investment (Million Rials per hectare))	Gross Income Annual (Million Rials per hectare)
Economic Analysis	1200 - 1320	720 -1200

Chamomile

Botany

Scientific Name
Matricaria chamomilla
Family Name
Asteraceae
Organs used
Flowers

Production hub with County suitable for cultivation capability

Production Rate	Cultivated Area
6 Tons	5/5 Acres

Brief Introduction

It is a Aromatic plant plant that grows to a height of about 30 centimeters and sometimes up to 60 centimeters. The leaves of chamomile are small and have narrow and irregular cuts and are covered with fluff. Chamomile flowers grow on the same surface and at the end of the stem and in summer.

Planting time
winter
Harvest Time
Spring

Economic Analysis

Amount Investment (Million Rials per hectare))	Gross Income Annual (Million Rials per hectare)
36 - 60	560 - 800

Black cumin

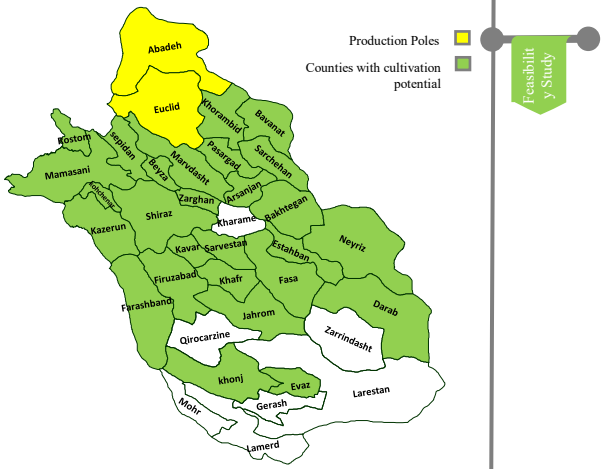
Botany

Scientific Name
Nigella arvensi
Family Name
Ranunculaceae
Organs used
Seed

Brief Introduction

The medicinal benefits of this plant are mainly due to its main active compound called thymoquinone. It has antioxidant, anti-inflammatory, and other therapeutic properties. These substances protect the body from cell damage and chronic diseases.

Production hub with County suitable for cultivation capability



Feasibility Study

Production Rate: 24 Tons

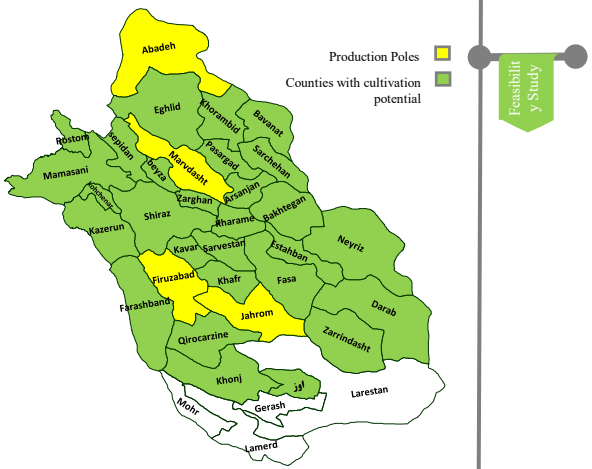
Cultivated Area: 30 Acres

Economic Analysis

Amount Investment (Million Rials per hectare))	Gross Income Annual (Million Rials per hectare)
120 –180	470 – 690

Scientific Name
Late fall to late winter
Harvest Time
Spring

Production hub with County suitable for cultivation capability



Feasibility Study

Production Rate

24 Tons

Cultivated Area

11 Acres

Rosemary

Economic Analysis	Amount Investment (Million Rials per hectare))	Gross Income Annual (Million Rials per hectare)
	840 –80	960 – 1360

Scientific Name
Rosmarinus officinalis
Family Name
Lamiaceae
Organs used
Aerial organs

Brief Introduction

Rosemary is a perennial, shrub and evergreen plant with dense branches and a height of 100 to 200 cm. This plant has blue flowers with a lot of aroma. There are no wild in Iran. It is resistant to salinity and drought. The surface of the leaves is green on the upper part and dark gray on the underside.

Planting time
Early Spring
Harvest Time
Economic harvest is done from the second and third year at the time of flowering.

Chicory

Botany

Scientific Name
Cichorium intybus
Family Name
Asteraceae
Organs used
Aerial organs

Chicory is an immortal herbaceous plant, and these plants grow up to 1 meter high. It has rounded leaves that are bitter-tasting and their hard branches have blue flowers.

Planting time
winter
Harvest Time
Spring

Production hub with County suitable for cultivation capability

Feasibility Study

Production Rate: 27/5 Tons

Cultivated Area: 9 Acres

Economic Analysis

Amount Investment (Million Rials per hectare))	Gross Income Annual (Million Rials per hectare)
36 -60	720 -1200

Roselle

Botany

Scientific Name
Hibiscus subdariffa
Family Name
Malvaceae
Organs used
sepal

Brief Introduction

It is an annual plant, shrubs 2–3 meters high, leaves 3–5 yellowish-green, yellow flowers with green sepals, which turn red after the fruit ripenes.

Planting time

Spring

Harvest Time

Autumn

Production hub with County suitable for cultivation capability

Feasibility Study

Production Rate

3/8 Tons

Cultivated Area

4 Acres

Economic Analysis

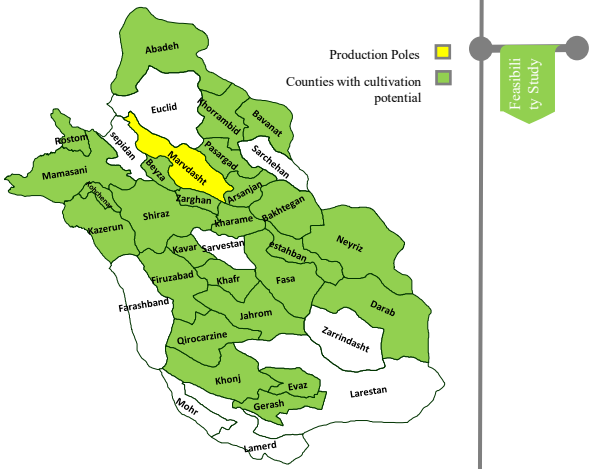
Amount Investment (Million Rials per hectare))	Gross Income Annual (Million Rials per hectare)
240 - 360	820 -1150

Porslane

Botany

Scientific Name
portulaca oleracea
Family Name
portulacaceae
Organs used
Seed

Production hub with County suitable for cultivation capability



Feasibility Study

Production Rate: 130 Tons

Cultivated Area: 260 Acres

Brief Introduction

Purslane needs an environment with a temperature of 25 degrees Celsius and plenty of light to grow. For this plant to grow, the soil must be rich and requires a lot of water.

Economic Analysis

Amount Investment (Million Rials per hectare))	Gross Income Annual (Million Rials per hectare)
36 - 60	290 - 450

Planting time
Spring to summer
Harvest Time
Late summer

Purple coneflower

Botany

Scientific Name

Echinacea purpurea

Family Name

Asteraceae

Organs used

Aerial organs

Brief Introduction

It is a herbaceous and perennial plant of the Chicory family with a maximum height of 1 to 1.5 meters. The lower leaves of the stem are ovate to spear-shaped, with a maximum length of 30 cm and a width of 20 cm.

Planting time

Spring

Harvest Time

Late Summer

Production hub with County suitable for cultivation capability

Feasibility Study

Production Rate

51/3 Tons

Cultivated Area

17/1 Acres

Economic Analysis

Amount Investment (Million Rials per hectare))	Gross Income Annual (Million Rials per hectare)
600 -720	1320 -1800

Rose of Damascus

Botany

Scientific Name
Rosa damascena
Family Name
Rosaceae
Organs used
Flower & bud

Brief Introduction

Rose is a shrub with sharp, cylindrical flowering branches, without grooves and comb compound leaves that have 3–5 cross-serrated leaflets.

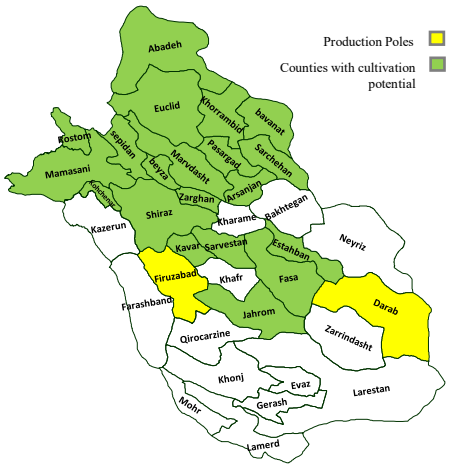
Planting time

Autumn & Winter

Harvest Time

Spring

Production hub with County suitable for cultivation capability



Feasibility Study

Production Rate

1440 Tons

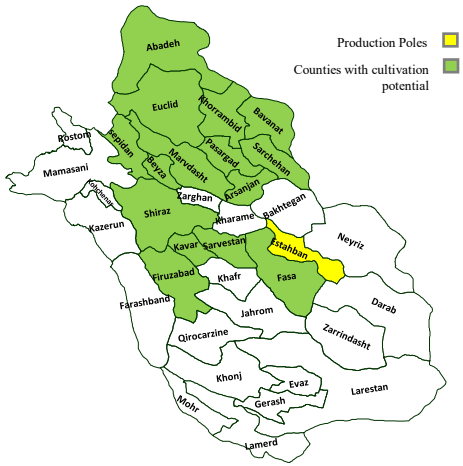
Cultivated Area

8500 Acres

Economic Analysis

Amount Investment (Million Rials per hectare))	Gross Income Annual (Million Rials per hectare)
360 - 480	430 - 720

Production hub with County suitable for cultivation capability



Feasibility Study

- Abadeh
- Arsanjan
- Bavanat
- sepidan
- Firuzabad
- eghlid
- Beyza
- Pasargad
- khorambid
- SarSarchehan
- Sarvestan
- Fasa
- Kavar
- Marvdasht
- Shiraz

Production Rate: **4/4 Tons**

Cultivated Area: **1052 Acres**

Botany

Scientific Name
Crocus sativus
Family Name
Iridaceae
Organs used
stigma

Brief Introduction

Saffron is a small, perennial plant with a height of 10 to 30 cm. From the middle of the bulb or the base of the stem, a number of long, narrow stigma emerge. From the middle of the leaves, a flowering stem emerges that leads to one to three flowers.

Planting time
Late Summer
Harvest Time
Autumn

Economic Analysis

Amount Investment (Million Rials per hectare))	Gross Income Annual (Million Rials per hectare)
1440 - 1700	2400 -2730

Shiraz Thyme

Botany

Scientific Name

Zataria multiflora

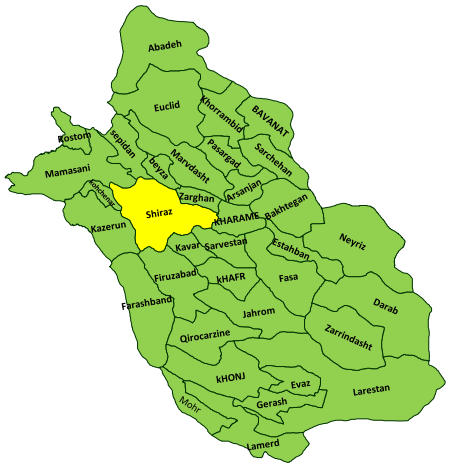
Family Name

Lamiaceae

Organs used

Aerial organs

Production hub with County suitable for cultivation capability



Feasibility Study

Production Rate

5 Tons

Cultivated Area

7/6 Acres

Brief Introduction

The small branches have white skin and are fluffy. The leaves are small circular or elliptical with a rounded base and rarely heart-shaped and almost tipped, the young leaves are short white fluffy and the older leaves are without fluff.

Economic Analysis

Amount Investment (Million Rials per hectare))	Gross Income Annual (Million Rials per hectare)
1320 - 1680	2100 - 6600

Planting time

Spring

Harvest Time

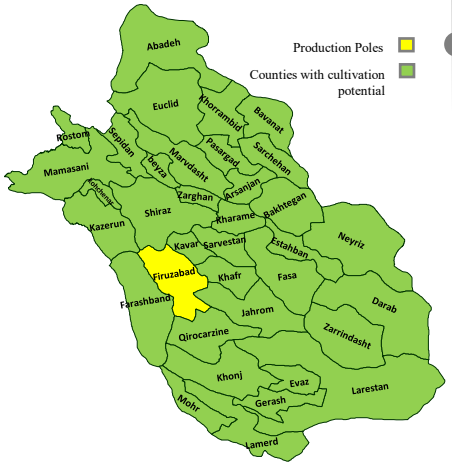
Spring & Summer

Garden Thyme

Botany

Scientific Name	Family Name	Organs used
Thymus vulgaris	Lamiaceae	Aerial organs

Production hub with County suitable for cultivation capability



Feasibility Study

Production Rate: 75 Tons

Cultivated Area: 64.9 acres

Brief Introduction

It has a straight root, more or less woody and abundant branches. The stem is straight and quadrangular and its height varies and depends on the climatic conditions where it grows and is between 20 and 50 cm.

Planting time	Harvest Time
Spring	Spring, smmer

Economic Analysis

Amount Investment (Million Rials per hectare))	Gross Income Annual (Million Rials per hectare)
720 - 840	900 - 1080

Dill

Botany

Scientific Name

Anethum graveolens

Family Name

Asteraceae

Organs used

Aerial organs

Brief Introduction

It is an annual or two-year-old plant that sometimes reaches a meter in height. Its root is straight, cone-shaped, and white.

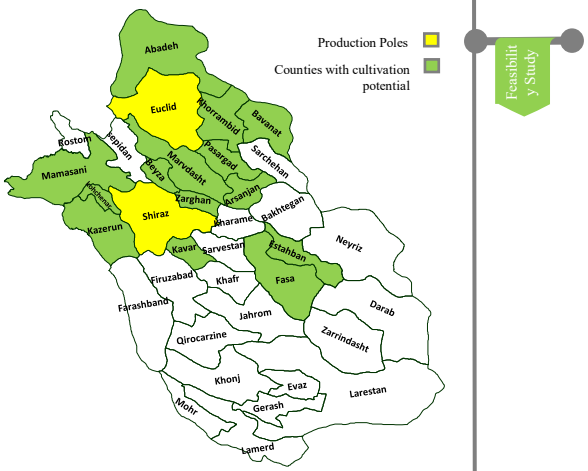
Planting time

Atumn & Winter

Harvest Time

Atumn & Winter

Production hub with County suitable for cultivation capability



Feasibility Study

Production Rate

656 Tons

Cultivated Area

279.8 hectares

Economic Analysis

Amount Investment (Million Rials per hectare))	Gross Income Annual (Million Rials per hectare)
600 -720	960 -1440

Savory

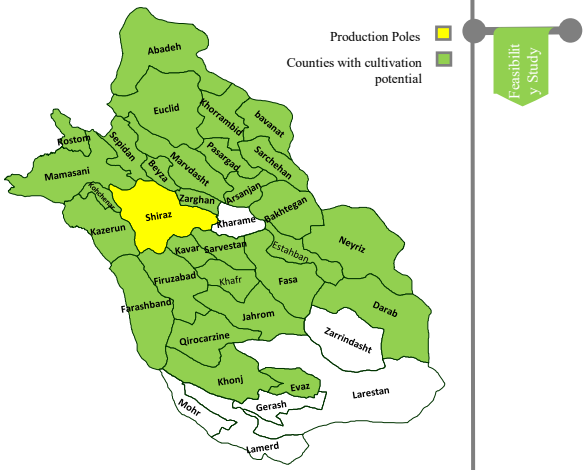
Botany

Scientific Name
Satureja hortensis
Family Name
Lamiaceae
Organs used
Aerial organs

Brief Introduction

Savory is an annual plant of the mint genus with numerous and reddish stems that grows wild in abundance in southern Europe and Asia (including Iran).

Production hub with County suitable for cultivation capability



Feasibility Study

Production Rate: 10 Tons

Cultivated Area: 9.2 hectares

Economic Analysis

Amount Investment (Million Rials per hectare))	Gross Income Annual (Million Rials per hectare)
180 -200	530 -720

Planting time
Spring
Harvest Time
Spring, Summer

Marjoram

Botany

Scientific Name

Origanum vulgare

Family Name

Lamiaceae

Organs used

اندام هوایی

Brief Introduction

It is a herbaceous, annual and sometimes biennial with a straight stem and oval cross branches and leaves. Its white, tiny flowers grow from the sides of the leaves in compact clusters.

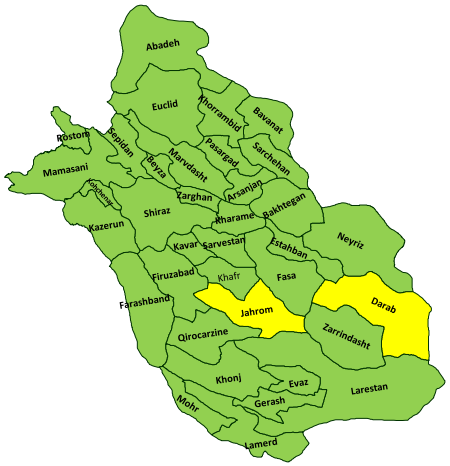
Planting time

Spring

Harvest Time

Spring & summer

Production hub with County suitable for cultivation capability



Feasibility Study

Production Rate: 35 Tons

Cultivated Area: 43 acres

Economic Analysis

Amount Investment (Million Rials per hectare))	Gross Income Annual (Million Rials per hectare)
600 -720	950 -1100

Field Pumpkin

Botany

Scientific Name

Cucurbita pepo

Family Name

Cucurbitaceae

Organs used

Seed

Brief Introduction

It is an annual plant of the pumpkin family that was created by a random natural mutation that resulted in a very thin outer shell (shellless seeds) that greatly facilitated the production of pumpkin oil, and also led to its dark green color.

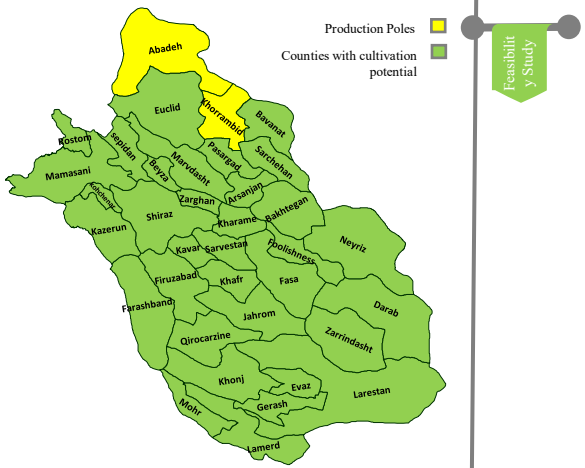
Planting time

Spring

Harvest Time

Spring

Production hub with County suitable for cultivation capability



Feasibility Study

Production Rate

10 Tons

Cultivated Area

10 hectares

Economic Analysis

Amount Investment (Million Rials per hectare))	Gross Income Annual (Million Rials per hectare)
360 -480	960 -1200

Milk thistl

Botany

Scientific Name

Silybum marianum

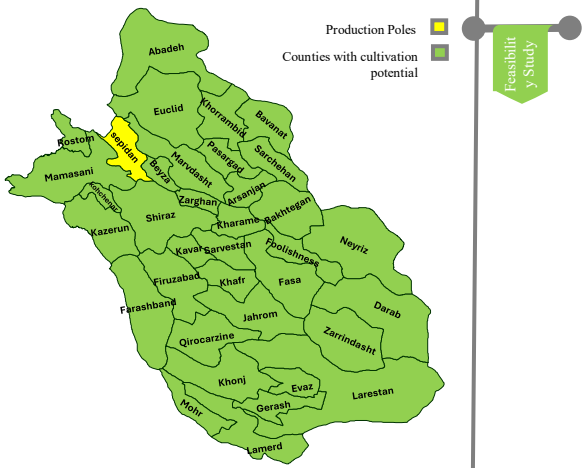
Family Name

Asteraceae

Organs used

Seed

Production hub with County suitable for cultivation capability



Feasibility Study

Production Rate

0.5 Tons

Cultivated Area

2 hectares

Brief Introduction

Milk thistle is a dicotyledonous plant, belonging to the genus Myrtaceae and the family Chicory. This plant has a growth period of every year or, in some species, every two years and grows naturally in nature.

Planting time

Winter

Harvest Time

Spring

Economic Analysis

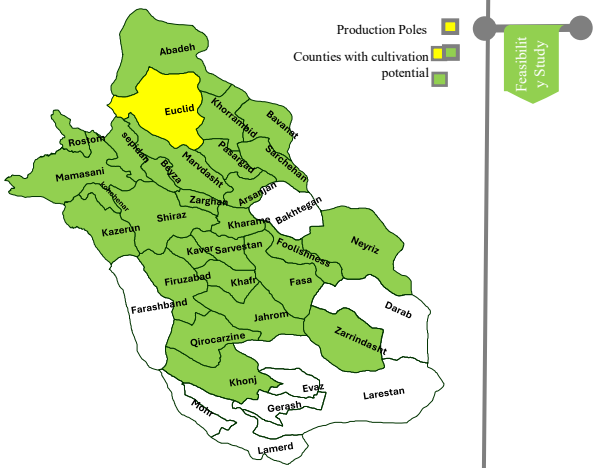
	Amount Investment (Million Rials per hectare))	Gross Income Annual (Million Rials per hectare)
Economic Analysis	120 -960	760 -1080

Licorice

Botany

Scientific Name	Family Name	Organs used
Glycyrhiza glabr	Fabaceae	Root

Production hub with County suitable for cultivation capability



Feasibility Study

Production Rate: 400 Tons

Cultivated Area: 200 hectares

Brief Introduction

This plant is one of the perennial herbaceous plants. The height of this plant reaches up to one meter and up to two meters in temperate regions. Its narrow leaves range from 7 to 15 centimeters long and include 9 to 17 leaflets. The leaves are elliptical, with smooth edges.

Planting time	Harvest Time
Spring	Autumn

Economic Analysis

Amount Investment (Million Rials per hectare))	Gross Income Annual (Million Rials per hectare)
960 -1200	3700 -4400

Fennel

Botany

Scientific Name

Foeniculum vulgaris

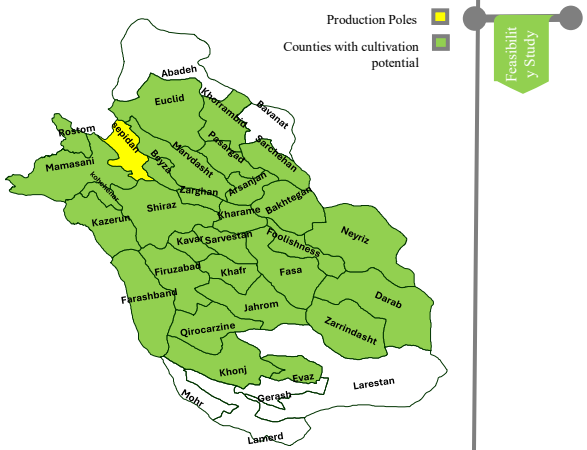
Family Name

Apiaceae

Organs used

Seed

Production hub with County suitable for cultivation capability



Feasibility Study

Production Rate

1.6 Tons

Cultivated Area

2 hectares

Brief Introduction

Fennel is a herbaceous and perennial plant that is reported to have originated in the Mediterranean and southern Europe. The height of fennel varies and depends on the climatic conditions where it grows.

Planting time

Spring

Harvest Time

Autumn

Economic Analysis

Amount Investment (Million Rials per hectare))	Gross Income Annual (Million Rials per hectare)
96 -120	460 -525

Assafoetida

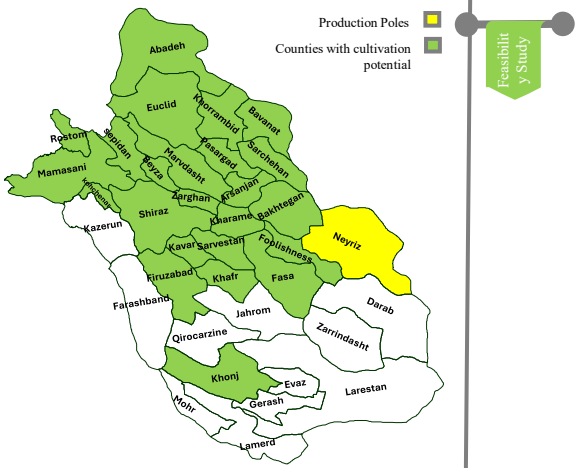
Botany

Scientific Name
Ferula assa foetida

Family Name
Apiaceae

Organs used
Root-derived (oleo-gum-resin)

Production hub with County suitable for cultivation capability



Feasibility Study

Production Rate
103 Tons

Cultivated Area
1737 hectares

Brief Introduction

It is a perennial herbaceous plant, its roots are slightly thick and fleshy, its leaves are very cut and dusty, its stem is fleshy and its height is up to 2 meters. Its flowers are yellow in color and appear in an umbrella-like groups at the end of the stem.

Planting time
Autumn&Winter

Harvest Time
Spring&summer

Economic Analysis

	Amount Investment (Million Rials per hectare))	Gross Income Annual (Million Rials per hectare)
	180 -240	2200 -2750

Marsh mallow

Botany

Scientific Name

Althaea officinalis

Family Name

Malvaceae

Organs used

Flower

Brief Introduction

It is a herbaceous and perennial plant with a height of about 2 meters, its stem is covered with tiny fluff that is gray in color.

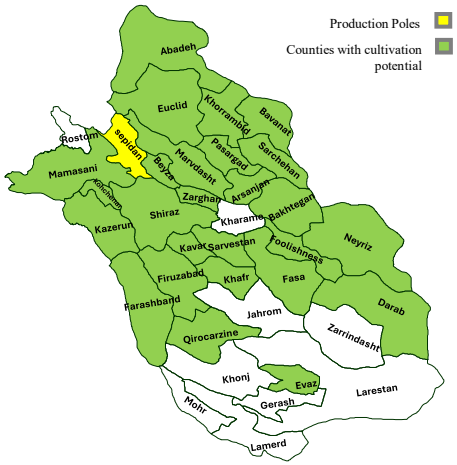
Planting time

Spring

Harvest Time

Spring&summer

Production hub with County suitable for cultivation capability



Feasibility Study

Production Rate

0.01 Tons

Cultivated Area

0.1 hectares

Economic Analysis

Amount Investment (Million Rials per hectare))	Gross Income Annual (Million Rials per hectare)
600 -720	960 -1320

Lemon balm

Botany

Scientific Name
Melissa officinalis

Family Name
Lamiaceae

Organs used
Leaves

Brief Introduction
The stems of this plant are straight and quadrangular and covered with fluff. From the side of its leaves, flowers grow with colored sepals that are pale yellow in the first, then white and finally purple.

Planting time
Spring

Harvest Time
Spring&summer

Production hub with County suitable for cultivation capability

Feasibility Study

Production Rate
16 Tons

Cultivated Area
32 hectares

Economic Analysis

Amount Investment (Million Rials per hectare))	Gross Income Annual (Million Rials per hectare)
600 -720	1320 -1960

Shallots

Botany

Scientific Name

Allium hitifolium

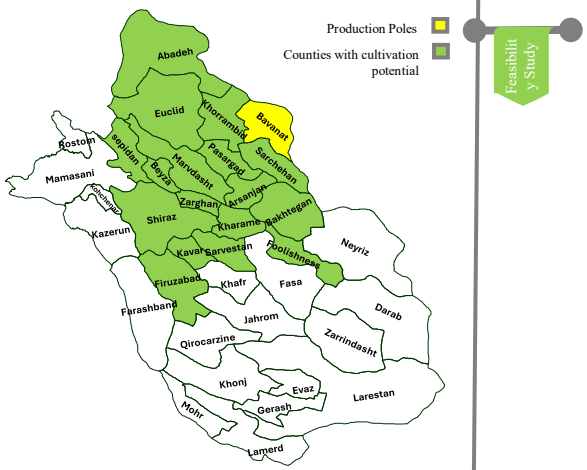
Family Name

liliaceae

Organs used

Onion

Production hub with County suitable for cultivation capability



Feasibility Study

Production Rate

100 Tons

Cultivated Area

11.36 hectares

Brief Introduction

It has linear green leaves and pointed spears with a length of 20 to 30 cm and pale pink or purple pink flowers. Shallots have a relatively short growth period.

Planting time

Autumn&Winter

Harvest Time

Spring

Economic Analysis

Amount Investment (Million Rials per hectare))	Gross Income Annual (Million Rials per hectare)
1800 -2200	2900 -3720

Christ's thorn jujube

Botany

Scientific Name

Ziziphus spina christi

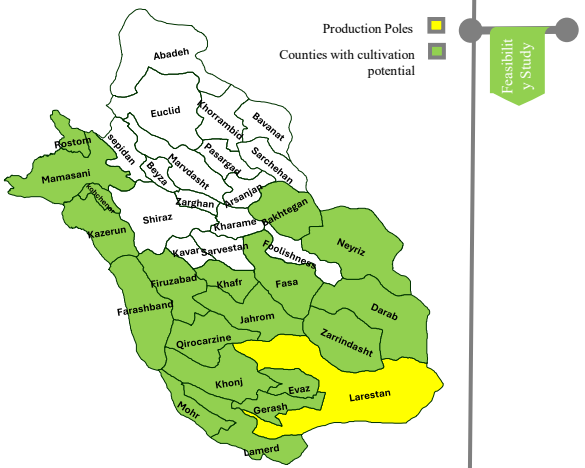
Family Name

Rhamnaceae

Organs used

Leaves

Production hub with County suitable for cultivation capability



Feasibility Study

Production Rate

3 Tons

Cultivated Area

7.5 hectares

Brief Introduction

it is a tree about 10 meters high with small, heart-shaped leaves and elongated with three prominent veins whose earrings have turned into thorns.

Planting time

Autumn&Winter

Harvest Time

Summer to Autumn

Economic Analysis

Amount Investment (Million Rials per hectare))	Gross Income Annual (Million Rials per hectare)
240 -360	480 -720

Lemongrass

Botany

Scientific Name

Cymbopogon sp

Family Name

poaceae

Organs used

Aerial limbs

Brief Introduction

The roots of this plant are short and more or less spreading and have many branches. The height of different species of lemongrass varies and can reach 90 to 240 cm depending on the conditions of the place where it grows.

Planting time

Spring

Harvest Time

Spring & summer

Production hub with County suitable for cultivation capability

Feasibility Study

Production Rate

1.7 Tons

Cultivated Area

1.1 hectares

Economic Analysis

Amount Investment (Million Rials per hectare))	Gross Income Annual (Million Rials per hectare)
600 -720	1620 -2100

Coriander

Botany

Scientific Name

Coriandrum sativum

Family Name

Apiaceae

Organs used

Seed

Brief Introduction

It is a herbaceous, leafless plant, 30 to 60 cm high, with Straight, Transparent stem, more or less grooved. Its leaves are divided into two distinct types, one at the base and divided into segments with shallow, serrated lobes and the other along the stem

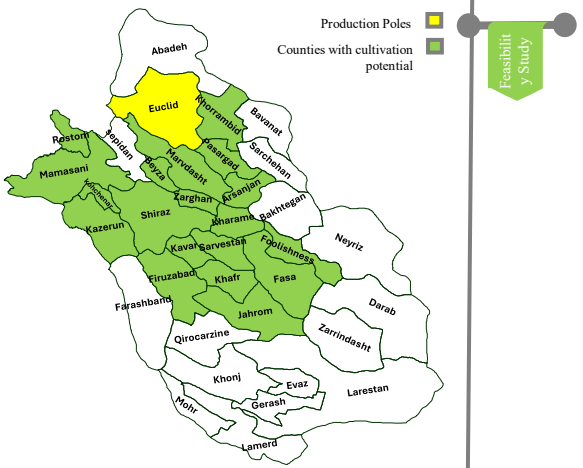
Planting time

Spring

Harvest Time

Late Spring

Production hub with County suitable for cultivation capability



0.2 Tons | **0.2 hectares**

Economic Analysis

	Amount Investment (Million Rials per hectare))	Gross Income Annual (Million Rials per hectare)
	96 -120	700 -880

Flowering Pomegranate

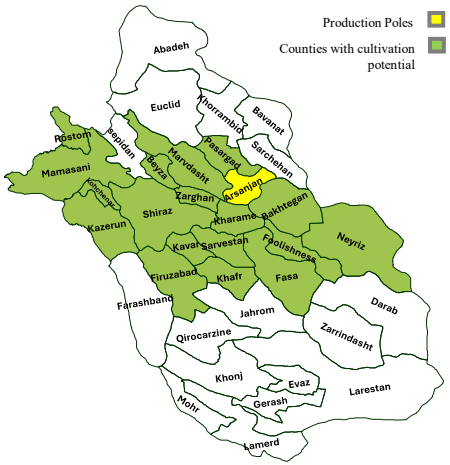
Botany

Scientific Name
Punica granatum Legrelliae or var. Pleniflora

Family Name
Punicaceae

Organs used
Flower

Production hub with County suitable for cultivation capability



Feasibility Study

Production Rate
20 Tons

Cultivated Area
20 hectares

Brief Introduction

It is a thorny shrub or a short tree without thorns, its leaves are oblong-lanceolate or ovate, glabrous and entire. Its flowers are leathery red with red, rarely white, petals.

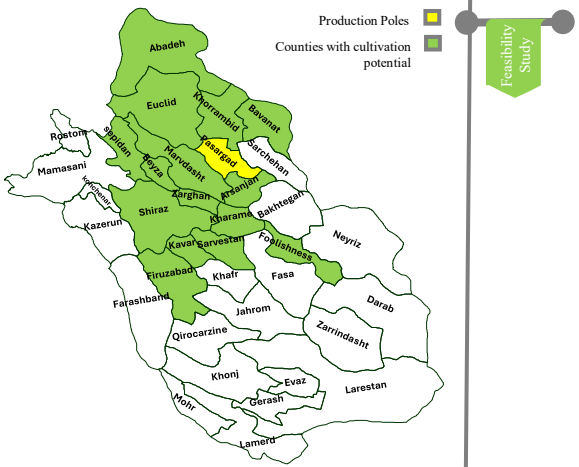
Planting time
Spring

Harvest Time
Late Spring

Economic Analysis

	Amount Investment (Million Rials per hectare))	Gross Income Annual (Million Rials per hectare)
	240 -360	600 -780

Production hub with County suitable for cultivation capability



Feasibility Study

Production Rate

1 Tons

Cultivated Area

1 hectares

Asparagus

Botany

Scientific Name

Asparagus officinalis

Family Name

Asparagaceae

Organs used

Stem

Brief Introduction

Its very small flowers are located on male and female stems, which have 6 sepals, 6 petals, 6 stamens, and a three-stamen pistil.

Planting time

Spring

Harvest Time

Spring&Summer

Economic Analysis

Amount Investment (Million Rials per hectare))	Gross Income Annual (Million Rials per hectare)
840 -980	440 -580

Lemon Beebrush

Botany

Scientific Name

Lippia citriodora

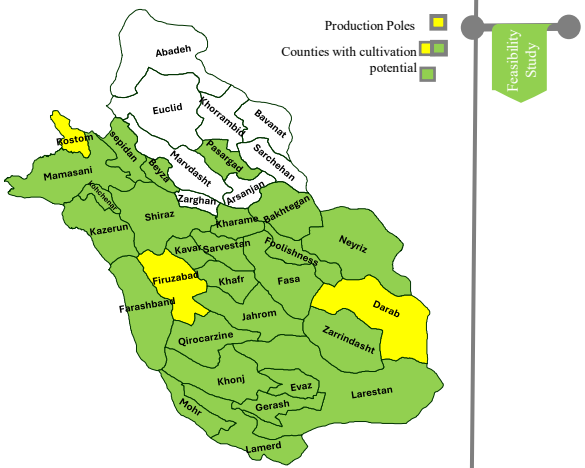
Family Name

Verbenaceae

Organs used

Leaves

Production hub with County suitable for cultivation capability



Feasibility Study

Production Rate

4 Tons

Cultivated Area

4 hectares

Brief Introduction

It is a shrub with an average height of 1.5 to 3 meters. Its leaves have a penetrating and pleasant smell that resembles lemon. The leaves are elongated like lemons, sharp-pointed, simple, rough and rough, light green in color, and are arranged in a row on the stem.

Economic Analysis

Amount Investment (Million Rials per hectare))	Gross Income Annual (Million Rials per hectare)
960 -1100	1960 -2900

Planting time

Spring

Harvest Time

Spring&Summer

muskwillow

Botany

Scientific Name

Salix aegyptica

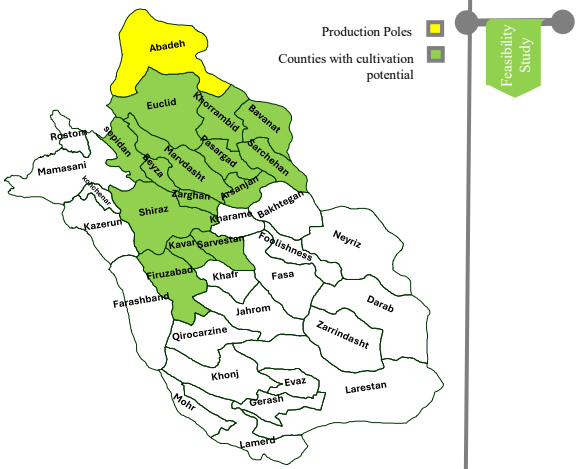
Family Name

Salicaceae

Organs used

Flower

Production hub with County suitable for cultivation capability



Feasibility Study

Production Rate

136 Tons

Cultivated Area

15 hectares

Brief Introduction

The catnip is dioecious, meaning the male and female flowers are separate, and They are different in appearance.

Planting time

Autumn

Harvest Time

Late Winter to Early Spring

Economic Analysis

Amount Investment (Million Rials per hectare))	Gross Income Annual (Million Rials per hectare)
600 -720	2400 -3840

Drumstick tree

Botany

Scientific Name

Moringa oleifera

Family Name

Moringaceae

Organs used

Leaves

Brief Introduction

Drumstick tree is a fast-growing, drought-resistant tree. It is cultivated for its pods and young leaves, consumed as a vegetable, and used to produce traditional herbal medicines.

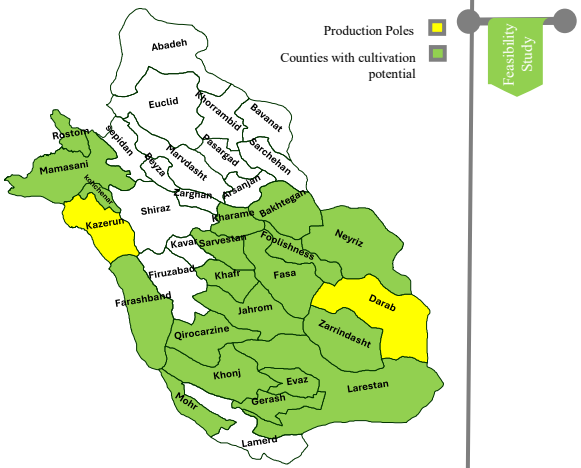
Planting time

Winter

Harvest Time

Spring & summer

Production hub with County suitable for cultivation capability



Feasibility Study

Production Rate

31.7 Tons

Cultivated Area

23.5 hectares

Economic Analysis

Amount Investment (Million Rials per hectare))	Gross Income Annual (Million Rials per hectare)
600 -720	1200 -1800

Borage

Botany

Scientific Name

Borago officinalis

Family Name

Boraginaceae

Organs used

Flowers

Brief Introduction

Borage is an annual herbaceous plant from the family of Boraginaceae that grows to an average height of 0.6 meters and its stem has tiny thorns.

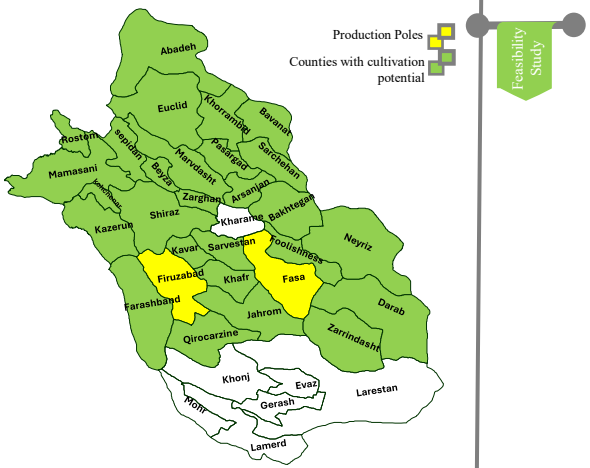
Planting time

Spring

Harvest Time

summer

Production hub with County suitable for cultivation capability



Feasibility Study

Production Rate

4.6 Tons

Cultivated Area

5 hectares

Economic Analysis

Amount Investment (Million Rials per hectare))	Gross Income Annual (Million Rials per hectare)
600 -720	900 -1500

shiraz Alyssum

Botany

Scientific Name

Alyssum homalocarpum Boiss

Family Name

Cruciferae

Organs used

Seed

Brief Introduction

Corbcille is a herbaceous, annual or perennial plant of the Cruciferae family, growing up to 60 cm in height. The plant has small, yellow flowers.

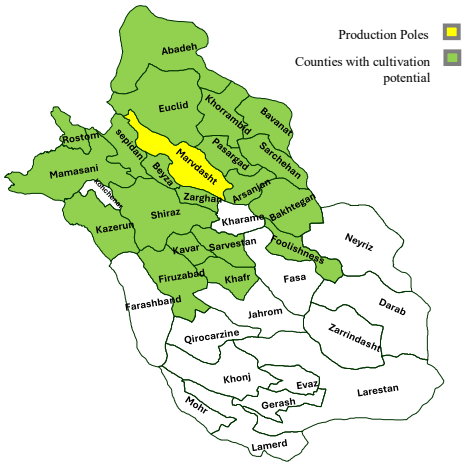
Planting time

Winter

Harvest Time

Spring & Summer

Production hub with County suitable for cultivation capability



Feasibility Study

Production Rate

21 Tons

Cultivated Area

42 hectares

Economic Analysis

Amount Investment (Million Rials per hectare))

500 -600

Sage

Botany

Scientific Name

Salvia officinalis

Family Name

Lamiaceae

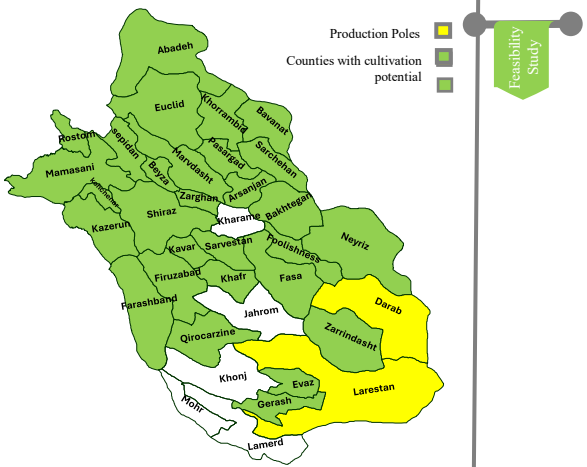
Organs used

Leaves & Flowers

Brief Introduction

Sage is a perennial herbaceous plant with a straight root and abundant branching, straight stem, and a height of between 50 and 80 centimeters.

Production hub with County suitable for cultivation capability



Feasibility Study

Production Rate

5 Tons

Cultivated Area

5 hectares

Economic Analysis

Amount Investment (Million Rials per hectare))	Gross Income Annual (Million Rials per hectare)
720 -840	840 -1260

Planting time

Spring

Harvest Time

Spring & Summer

Myrtle

Botany

Scientific Name

Myrtus communis

Family Name

Myrtaceae

Organs used

Leaves

Brief Introduction

It is an evergreen shrub or bush that sometimes reaches a height of 5 meters. Leaves are about 3 to 5 cm long and have a very pleasant smell. Petals are white and its ball-shaped fruit is blue.

Planting time

Spring

Harvest Time

Spring & Summer

Production hub with County suitable for cultivation capability

Feasibility Study

Production Rate

35 Tons

Cultivated Area

8 hectares

Economic Analysis

Amount Investment (Million Rials per hectare))	Gross Income Annual (Million Rials per hectare)
1340 -1560	1340 -1800

marigold

Botany

Scientific Name

Calendula officinalis

Family Name

Asteraceae

Organs used

Flower

Brief Introduction

It is an evergreen shrub or bush that sometimes reaches a height of 5 meters. Leaves are about 3 to 5 cm long and have a very pleasant smell. Petals are white and its ball-shaped fruit is blue.

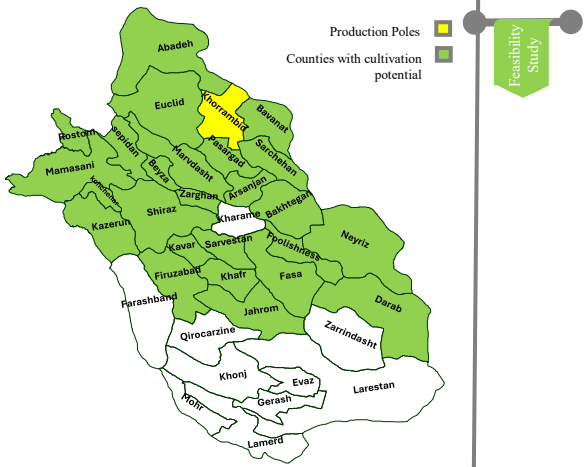
Planting time

Spring

Harvest Time

Spring & Summer

Production hub with County suitable for cultivation capability



Feasibility Study

Production Rate

0.15 Tons

Cultivated Area

0.1 hectares

Economic Analysis

Amount Investment (Million Rials per hectare))	Gross Income Annual (Million Rials per hectare)
540 -680	480 -600

Ajwain

Botany

Scientific Name

Trachyspermum ammi

Family Name

Apiaceae

Organs used

Seed

Brief Introduction

Ajwain has thin, delicate incisions leaves and white flowers in a compound umbel. The fruit is small, oval, and yellowish-brown in color.

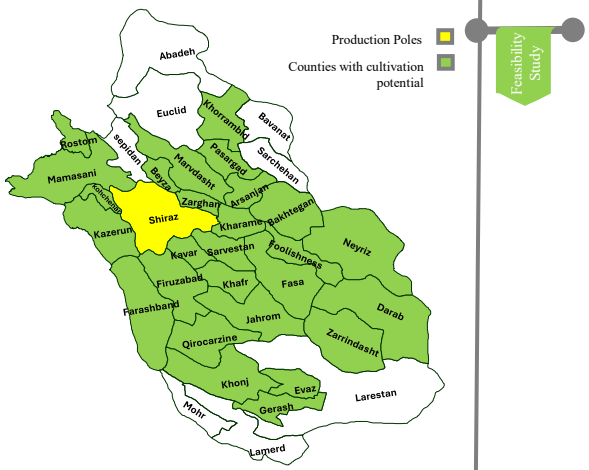
Planting time

Spring

Harvest Time

Late Summer

Production hub with County suitable for cultivation capability



0. 5 Tons

0.7 hectares

Economic Analysis

Amount Investment (Million Rials per hectare))	Gross Income Annual (Million Rials per hectare)
96 -120	530 -730

Agricultural-jihad Organization of Fars Province

Atlas of Medicinal Plants of Fars Province

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